AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A magnetic angular-position sensor mounted between two carrier elements ~~(1, 2)~~ that are movable in rotation relative to each other about an axis of rotation ~~(X)~~, the sensor comprising firstly a magnetic body ~~(3)~~ defining a working zone ~~(4)~~ in which there extends a magnetic field having field lines perpendicular to the axis of rotation ~~(X)~~, and secondly a detector member comprising at least one probe ~~(5)~~ extending in the working zone ~~(4)~~ of the magnetic member ~~(3)~~ in order to provide a signal ~~(S)~~ as a function of the angular orientation of the probe ~~(5)~~ relative to the field lines in the working zone, ~~the sensor being characterized in that~~ wherein the magnetic member comprises two parallel magnet segments ~~(6; 6')~~ and two elongate pole pieces ~~(7)~~ of ferromagnetic material extending perpendicularly to the magnet segments ~~(6; 6')~~ and covering the ends thereof.

2. (Currently Amended) A sensor according to claim 1, ~~characterized in that~~ wherein the magnet segments are bar magnets ~~(6)~~.

3. (Currently Amended) A sensor according to claim 2, ~~characterized in that~~ wherein the pole pieces ~~(7)~~ have chamfered ends ~~(11)~~.

4. (Currently Amended) A sensor according to claim 1, ~~characterized in that~~ wherein the magnetic member comprises a U-shaped magnet ~~(15)~~ having flanges ~~(6')~~ forming the magnet segments and a web ~~(8)~~ forming a bottom for the magnetic member ~~(3)~~.

5. (Currently Amended) A sensor according to claim 4, ~~characterized in that~~ wherein the pole pieces ~~(7)~~ have edges ~~(11, 12)~~ that are chamfered following a profile of the U-shaped magnet.

6. (Currently Amended) A sensor according to claim 1, ~~characterized in that~~ wherein the sensor is connected to the two carrier elements ~~(1, 2)~~ in such a manner that the probe ~~(5)~~ moves over a detection range for which the signal ~~(S)~~ from the detector ~~(5)~~ is substantially linear.

7. (Currently Amended) A sensor according to claim 6, ~~characterized in that~~ wherein the working range extends over 35° on either side of the position in which the magnetic field measured by the probe ~~(5)~~ is zero.